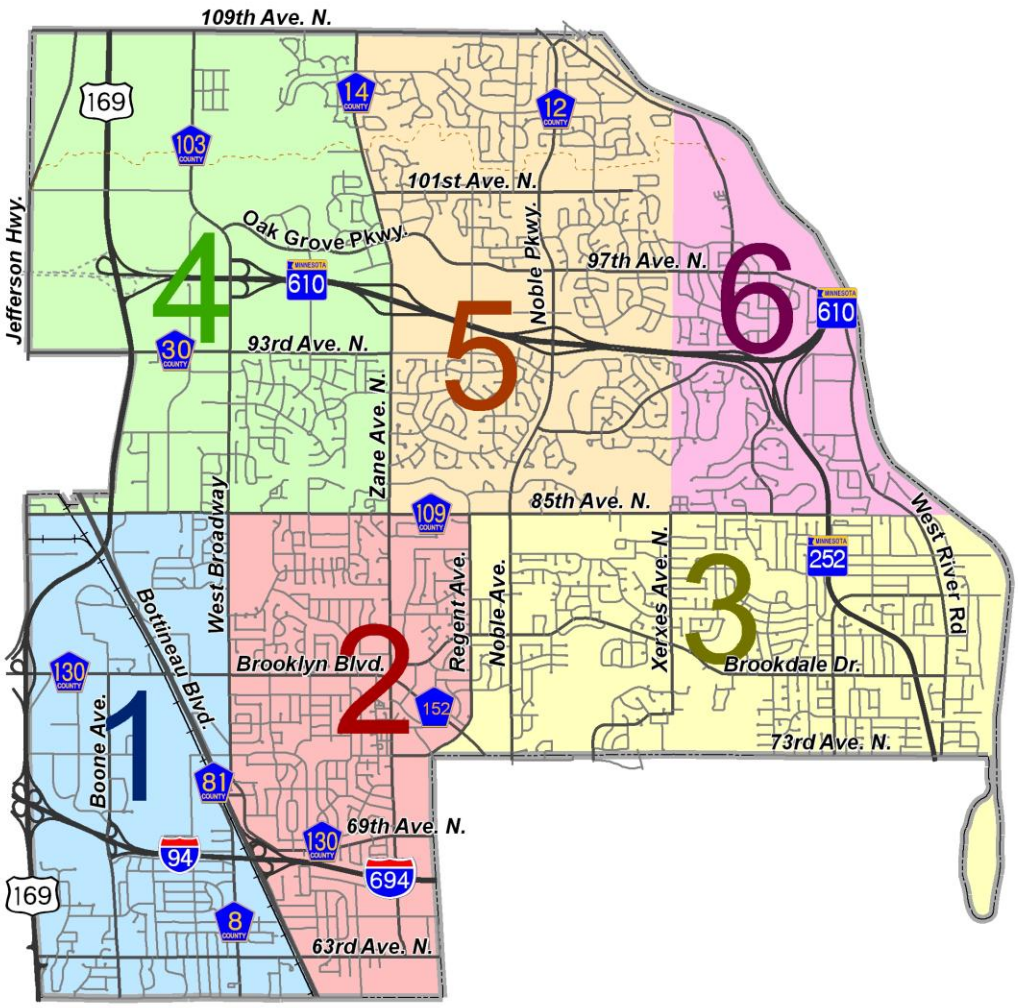
CHAPTER 6: UTILITIES

6.1 Purpose

The purpose of this chapter is to plan and review the City's utility network to accommodate current and future needs. The chapter includes three sections: 6.2 Water Supply & Distribution Plan, 6.3 Surface Water Management Plan, and 6.4 Comprehensive Sanitary Sewer Plan. Each section describes the City's existing and future utility systems. Figure 6.1 illustrates the City's utility districts.

Figure 6.1: Utility Districts
February 2008



6.2 Water Supply & Distribution Plan

In 2007, the City pumped, treated, and distributed an average of 10 million gallons per day (MGD) to approximately 22,140 customers. The City's goal is to provide a potable, reliable, long lived water system with economical operations and low cost maintenance that meets quality standards

and peak day water demands for rate payers and users. In 1999 the City prepared a Water System Plan update for the northern growth area that had replaced previous plans in 1991, 1993, and 1998. This plan replaces the 1999 update.

6.2.1 Existing Water System

The following Figure 6.2.1A illustrates the City's current water distribution system including location of the water treatment plant, water lines, inter-community connections, wells and reservoirs.

Figure 6.2.1A: Existing Water Distribution System

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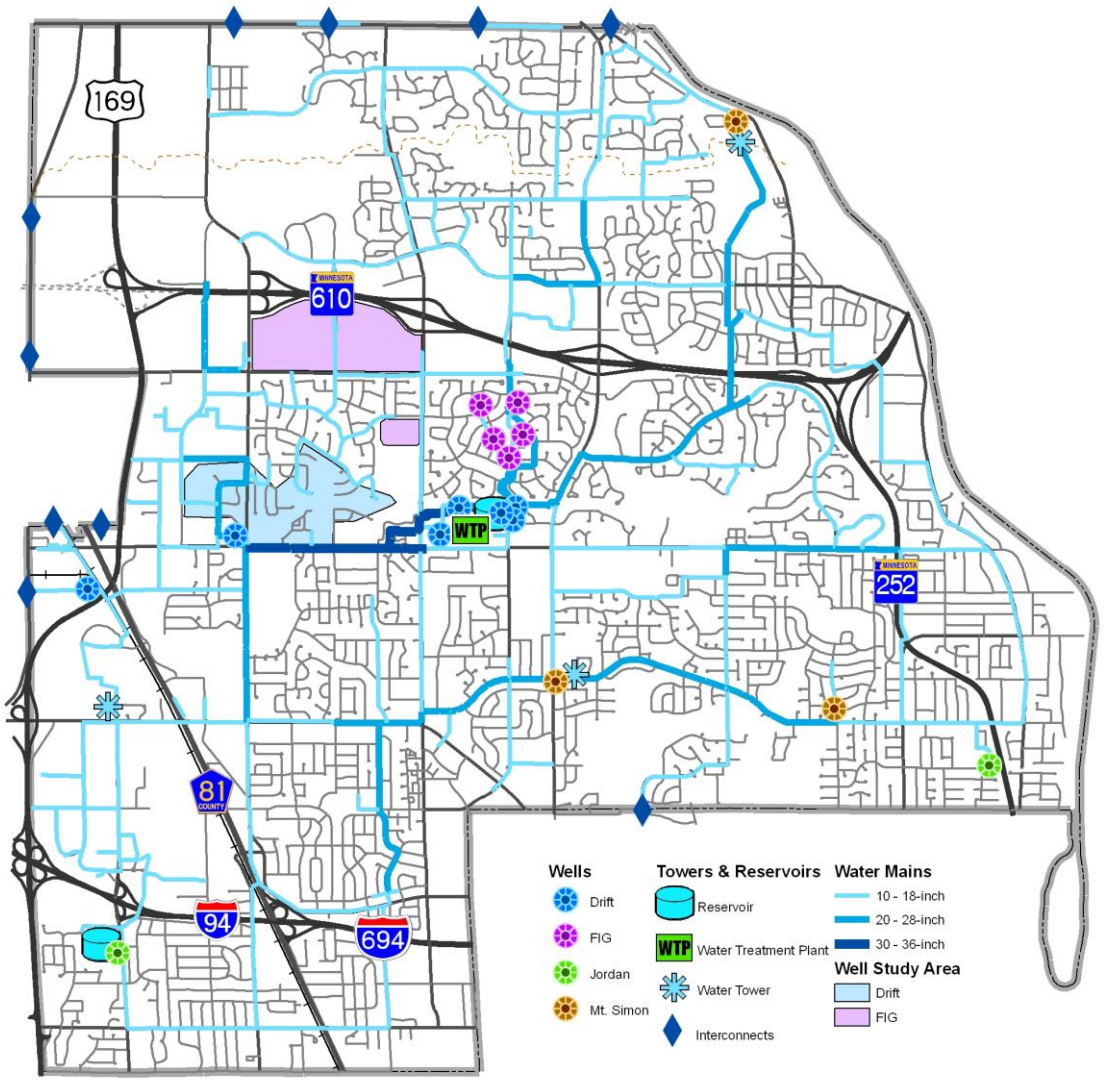


Water Supply
In December 2006, SEH (Short Elliott Hendrickson Inc.) completed a *Water System Supply and Treatment Master Plan*, which can be found in its entirety with the City's Public Utilities Division of the Operations & Maintenance Department. The City obtains 100 percent of its domestic and irrigation water from 14 ground water wells. The water is drawn from the following 4 aquifers: Quaternary 'glacial drift' – 68 percent, Franconia Ironton Galesville 'FIG' – 26 percent, Jordan – 4 percent, and Mount Simon – 2 percent. The glacial drift wells are the primary supply to the system, however the quality of the raw water is low. The raw water contains manganese, iron, magnesium, calcium and other dissolved solids. The raw water is conveyed through transmission mains to the City's water treatment facility. Once at the water treatment plant, the water is brought up to drinking water standards in accordance with State and Federal regulations. The water is then pumped into the distribution system.

Water (Wellhead) Protection Plan
The *Wellhead Protection Plan* is a two-part document that can be found in its entirety with the City's Public Utilities Division of the Operations & Maintenance Department. Part 1 developed criteria which delineated an area known as the DWSMA (Drinking Water Supply Management Area) and identified the vulnerability of the available aquifer(s) to contamination. Part 1 of the plan was completed, submitted to the state and approved on August 6, 2004. Part II was approved on June 16, 2007 and several action items are ongoing. Please refer to figure 6.2.1B which shows the location of the Wellhead Protection Area.

The overall plan, which sets parameters for implementation. In general, the goals of the plan are: 1) Protect the aquifer, public water supply wells and promote wise land use in the DWSMA(s) and the City as a whole; 2) Provide a safe, potable water supply, manage the available aquifers, promote and increase public awareness of groundwater problems and monitor or restrict activities that expose the groundwater to contamination; 3) Educating the general public about groundwater issues; 4) Advocating and implementation of land use best management practices; and 5) Well management and collection of data relevant to wellhead protection planning.

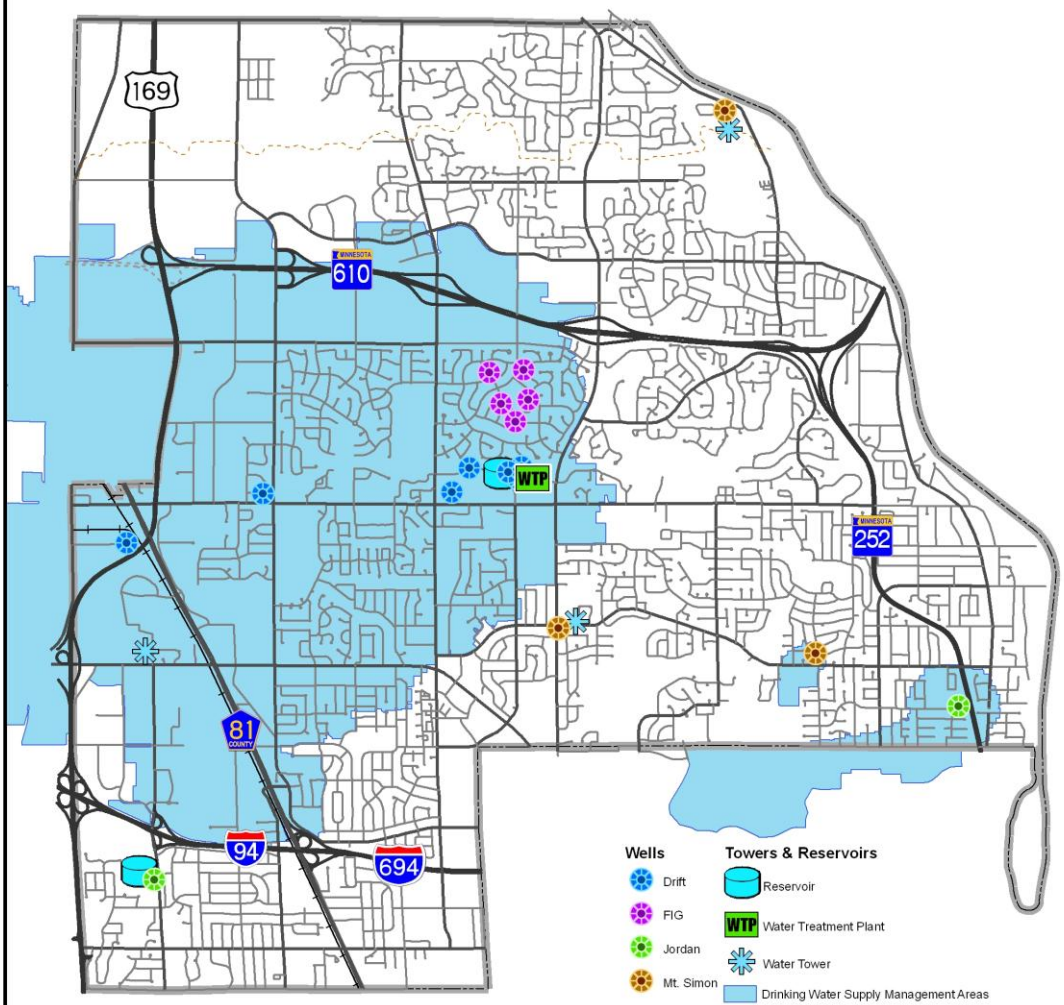
Part 2 of the Wellhead Protection Plan includes: 1) The results of an inventory of potential contamination sources that may impact the City of Brooklyn Park's Public Water Supply; 2)Strategies to address potential contaminant sources identified; 3) An evaluation plan to assess implementation effectiveness of the WHP Plan, and 4) An Emergency/Alternative Water Supply Contingency Plan to assist the City in the event of an environmental disaster or major disruption of the water supply system.

At this time it is the City's intention to continue to use ground water for current and future consumption demands.

Water Treatment
In October 2006, SEH (Short Elliott Hendrickson Inc.) completed a *Water System Supply and Treatment Master Plan*, which can be found in its entirety with the City's Public Utilities Division of the Operations & Maintenance Department. The City has one centrally located water treatment plant. The treatment plant removes the manganese and iron. The hardness is removed by the customers by use of water softeners. The water treatment facility's capacity is 20 million gallons per day (MGD) and efficiency is 96-97 percent. Waste water from the plant is disposed via the sanitary sewer system. Other chemicals such as fluoride, polyphosphate, and chlorine are added prior to delivery into the distribution system.

Figure 6.2.1B: Drinking Water Supply Management Areas

February 2008



Water Storage

The City has 5 reservoirs which can store 15 million gallons of water. Sixty percent (9 MG) is located at the water treatment plant ground reservoir in the center of the City, 27 percent (4 MG) is in elevated reservoirs (3 water towers) throughout the City and the remaining 13 percent Bass Creek ground reservoir. A pressure of 60-70 pounds per square inch is maintained for fire protection.

Table 6.2.1A Existing Water Supply, Treatment & Storage		
	Current	**Ultimate**
Emergency Capacity	6 MGD	8 MGD
Pumping Capacity	30 MGD	33 MGD
Treatment Capacity	20 MGD	32 MGD
Storage Capacity	15 MGD	17 MGD
(MGD) Million Gallons per Day		

Inter-Community Connections

In November 2006 Blue Stone Engineering completed a *City of Brooklyn Park Water Main Interconnections with Adjoining Communities* report, which can be found in its entirety with the City's Public Utilities Division of the Operations & Maintenance Department. The following table of watermain interconnections is from the report.

Table 6.2.1B
City of Brooklyn Park Watermain Interconnections with Adjoining Communities

No.	Type of Connection	Connected To	Location Name	Location	Watermain Size
1	Service	Maple Grove	St. Vincent de Paul Church	Jefferson Hwy at 93rd Ave	6"
2	Service	Maple Grove	St. Vincent de Paul Church	Jefferson Hwy north of 93rd Ave	8"
3	Service	Maple Grove	Anjuman-e-asghari Islamic Center	10301 Jefferson Hwy.	8"
4	Emergency Interconnect	Champlin	109th Ave N & Quebec Ave N	109th Ave N & Quebec Ave N	6"
5	Emergency Interconnect	Champlin	Oxbow Creek Elementary	6050 109th Ave N (at Brittany Drive N)	12"
6	Service	Champlin	Champlin Park High School	6025 109th Ave N (east of Douglas Dr N)	12"
7	Emergency Interconnect	Champlin	Mississippi Drive N	Mississippi Dr N south of Indiana Ave N	8"
8	Emergency Interconnect	Brooklyn Center	France Ave N	73rd Ave N and France Ave N	12"
9	Emergency Interconnect	Maple Grove	Jefferson Highway & 83rd Ave N	Jefferson Highway & 83rd Ave N	12"
10	Emergency Interconnect	Osseo	Osseo Water Tower	85th Ave N east of Jefferson Highway	12"
11	Service	Osseo	Commercial properties	4th St SE and Aspen Ln	8"

Water Emergency and Conservation Plan
The plan was submitted to the MN-DNR and Metropolitan Council on October 15, 2007.

A general outline of the plan is as follows:

Part 1. Water Supply Description and Evaluation
Part II. Emergency Response Procedures
Part III. Water conservation Plan
Part IV. Items for Metropolitan Area Public Suppliers

The plan also includes many tables, figures and references.

6.2.2 Historic Water Demand

In December 2006, SEH (Short Elliott Hendrickson Inc.) completed a *Water System Supply and Treatment Master Plan*, which can be found in its entirety with the City's Public Utilities Division of the Operations & Maintenance Department. The following Historical Pumping Data Table was included in the Plan. The table illustrates the water demand from 1979 to 2005.

Historical Pumping Data - Peaking Factor and Per Capita Demand Calculations

Year	Total Pumped (gal)	AD Demand (MGD)	AD Demand (gpm)	MD Demand (gpm)[1]	MD Peaking Factor[1]	Population	Per Capita AD Demand (gpd)
1979	1,252,987,000	3.433	2,384	6,875	2.884	40,380	85
1980	1,472,300,000	4.023	2,794	7,639	2.734	43,332	93
1981	1,489,560,000	4.081	2,834	9,097	3.210	43,950	93
1982	1,580,300,000	4.330	3,007	11,667	3.880	45,280	96
1983	1,546,200,000	4.236	2,942	10,694	3.635	46,910	90
1984	1,729,600,000	4.726	3,282	10,139	3.090	48,780	97
1985	1,766,545,000	4.840	3,361	11,944	3.554	50,510	96
1986	1,838,000,000	5.036	3,497	10,324	2.952	51,424	98
1987	2,261,400,000	6.196	4,303	11,935	2.774	52,392	118
1988	2,645,700,000	7.229	5,020	15,973	3.182	53,842	134
1989	2,706,055,000	7.414	5,149	13,549	2.632	55,294	134
1990	2,282,056,000	6.252	4,342	12,556	2.892	56,381	111
1991	2,245,402,000	6.152	4,272	8,000	1.873	*Population estimates for 1991 - 1997 were unavailable*	
1992	2,481,534,000	6.799	4,721	11,000	2.330		
1993	2,137,086,000	5.855	4,066	7,000	1.722		
1994	2,532,029,000	6.937	4,817	10,000	2.076		
1995	2,550,900,000	6.989	4,853	11,000	2.266		
1996	2,886,620,800	7.909	5,492	14,000	2.549		
1997	2,786,016,484	7.633	5,301	16,000	3.019		
1998	3,166,107,130	8.674	6,024	13,000	2.158	65,643	132
1999	2,672,313,735	7.321	5,084	10,000	1.967	66,536	110
2000	3,127,597,890	8.545	5,934	13,000	2.191	67,388	127
2001	3,236,976,002	8.868	6,159	17,000	2.760	68,204	130
2002	2,766,834,344	7.580	5,264	11,000	2.090	68,987	110
2003	3,442,768,955	9.432	6,550	18,000	2.748	69,743	135
2004	3,213,937,981	8.781	6,098	17,361	2.847	70,473	125
2005	3,296,239,000	9.006	6,254	17,000	2.718	71,275	126
PF (MD):		2.6					
Average Per Capita AD Demand (gpd):		124					

[1]Values representing maximum day demand for 1991 - 2003, and 2005, are estimates based on maximum month data

6.2.3 Future Water System

This section includes projected future water needs, location of planned improvements for the City's water system and cost estimates for those improvements.

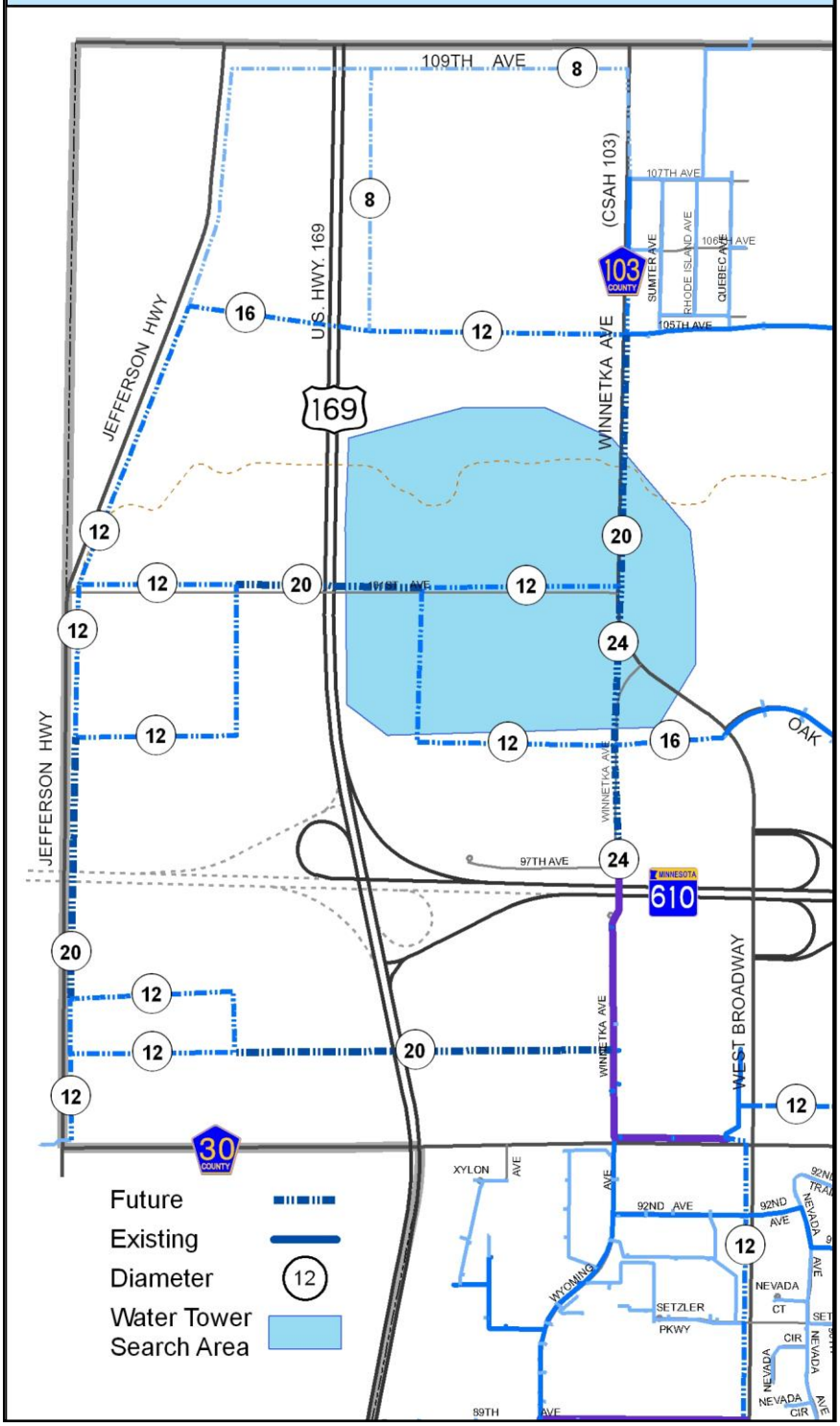
Table 6.2.3A: Projected Water Demand			
Year	**Population**	**Water**	**Demand**
		Average Day (MG)	Maximum Day (MG)
Current	75,000	10	25
2010	77,000	10.3	26
2020	84,000	11.1	29.0
2030	89,000	12	32

Table 6.2.3B: Water Connections by Land Use				
Water Connections		**Estimated Annual consumption (MG)**	**Average Daily Consumption Per Connection (gallons/day)**	**% of Total**
Land Use	**Number of Connections**			
Single Family	16,613	2,447.7	403	64.4
Town homes	3,460	286.9	227	7.6
Duplex	1,019	80.8	217	2.1
Multi-Family	216	404	5,124	10.6
Residential Sub-Total	**21,308**	**3,219.4**	**151.1**	**84.7**
Commercial	594	415.2	1,915	9.7
Institutional	110	92.2	2,296	2.4
Industrial	127	73.2	1,495	1.9
WTP	1	50	137,000	1.3
Non-Residential Sub-Total	832	630.6	1,912	15.3
TOTAL	**21,657**	**3,850**		**100**

Future additions and improvements of the water system consider the following factors: 1) Land use development staging found in Chapter 3 of the Comprehensive Plan; 2) Future roadway improvements found in Chapter 5 of the Comprehensive Plan; 3) Water system integrity; and 4) Location of previously installed facilities. The following Figure 6.2.1 shows the existing and planned to the water distribution system.

Figure 6.2.3: Water System Planned Improvements

February 2008



6.3 Surface Water Management Plan

The Update of the Comprehensive Surface Water Management Plan is scheduled for completion by the end of 2007. During 2007-2008 the City will also be working on a number of Storm Water related issues including:

- Preparation and submittal of a Non-Degradation Report to the MnPCA in conformance with the cities MS4 Permit.
- Begin implementation of BMP's in conformance with the approved Chloride TMDL for Shingle Creek.
- The city will also be coordinating with the Shingle Creek and West Mississippi Watershed Management Commissions on a number of additional stream and lake TMDL's.

6.3.1 Previous Plans

The current Comprehensive Storm water Management Plan was prepared in November 1993.

In September, 2000 WSB Associates, Inc. prepared the "Northern Brooklyn Park Trunk Storm Water Conveyance System Study" which including a detailed description of storm water improvements necessary to adequately manage the storm water runoff from the portion of Brooklyn Park north of TH 610.

Brooklyn Park prepared Storm Water Study for the Area North of TH 610 and east of Regent Avenue, dated June, 1998, which investigated alternatives to manage storm water runoff in the northeast portion of the City.

The West Mississippi Watershed Management Commission prepared a report entitled Oxbow Creek Drainage Study, dated May 1991. The study investigates drainage from the Oxbow Creek watershed, north across 109th Avenue, into the City of Champlin. This report was superseded by the "Storm Water Feasibility Report for the Oxbow Creek Watershed" dated June, 2003.

6.4 Sanitary Sewer Plan

The Sanitary Sewer System Plan has been prepared in accordance with the WRMPP (Water Resources Management Policy Plan) Appendix B-1 and the Brooklyn Park System Statement released by the Metropolitan Council in 2006. This plan contains a description of the existing wastewater collection system and a detailed analysis of the local system to determine future estimated sanitary sewer flows. Additionally, ordinances and policies regarding infiltration and inflow and illegal connections to the sanitary sewer system are discussed.

6.4.1 Previous Plans

A City Sanitary Sewer System Plan was prepared and adopted in the early 1980's. The City of Brooklyn Park at that time was fully developed south of 85th Avenue and undeveloped north of 85th Avenue. The plan included a recommended sanitary sewer system for the undeveloped portion of the City. The most current Sanitary Sewer System Plan was prepared and adopted in 1999.

In February 1993, the Metropolitan Waste Control Commission completed the *Elm Creek Interceptor Facility Plan*. This plan investigated several options to best serve the Elm Creek Watershed,

including the northern portion of Brooklyn Park, through the year 2050. As a result of this plan, the Elm Creek Interceptor was constructed along the 101st Avenue alignment in Brooklyn Park.

6.4.2 Existing Sanitary Sewer System

Metropolitan Council System

Brooklyn Park has five Metropolitan Council interceptors that collect wastewater for the City. The interceptors drain towards the southeast corner of the City where they converge prior to crossing the Mississippi River via a large lift station L-32 across the Mississippi River to another Interceptor. Measurement of sanitary sewer flow within Brooklyn Park is done by the Metropolitan Council using several meters located along the borders of the city. The Metropolitan Council sewer mains (Interceptors) that serve Brooklyn Park and are shown on (Figure 6.4.2):

Brooklyn Park Interceptor. A gravity main that starts immediately west of the Mississippi River at Brookdale Drive and Mississippi Lane and extends west to County Road 81. The diameter of this interceptor ranges from 48 inches to 54 inches. This interceptor serves the portion of Brooklyn Park that is south of 85th Avenue and east of Xylon Avenue. The capacity of the interceptor ranges from 16.2 MGD at the west portion to 27.9 MGD at its east end.

Maple Grove South Interceptor. The Maple Grove South Interceptor extends south and then west to Maple Grove from the west terminus of the Brooklyn Park Interceptor. The diameter of this gravity interceptor is 42 inches. The area within Brooklyn Park served by this interceptor is generally west of Co. Rd. #81 and south of Brooklyn Boulevard. The interceptor has a capacity of 9.4 MGD.

Maple Grove North Interceptor. The Maple Grove North Interceptor extends north from the west terminus of the Brooklyn Park Interceptor to 85th Avenue then into Maple Grove. The diameter of this interceptor is 36 inches. The area within Brooklyn Park served by this interceptor is generally west of County Road 81 and north of Brooklyn Boulevard. This interceptor has a capacity of 9.2 MGD and also serves the City of Osseo.

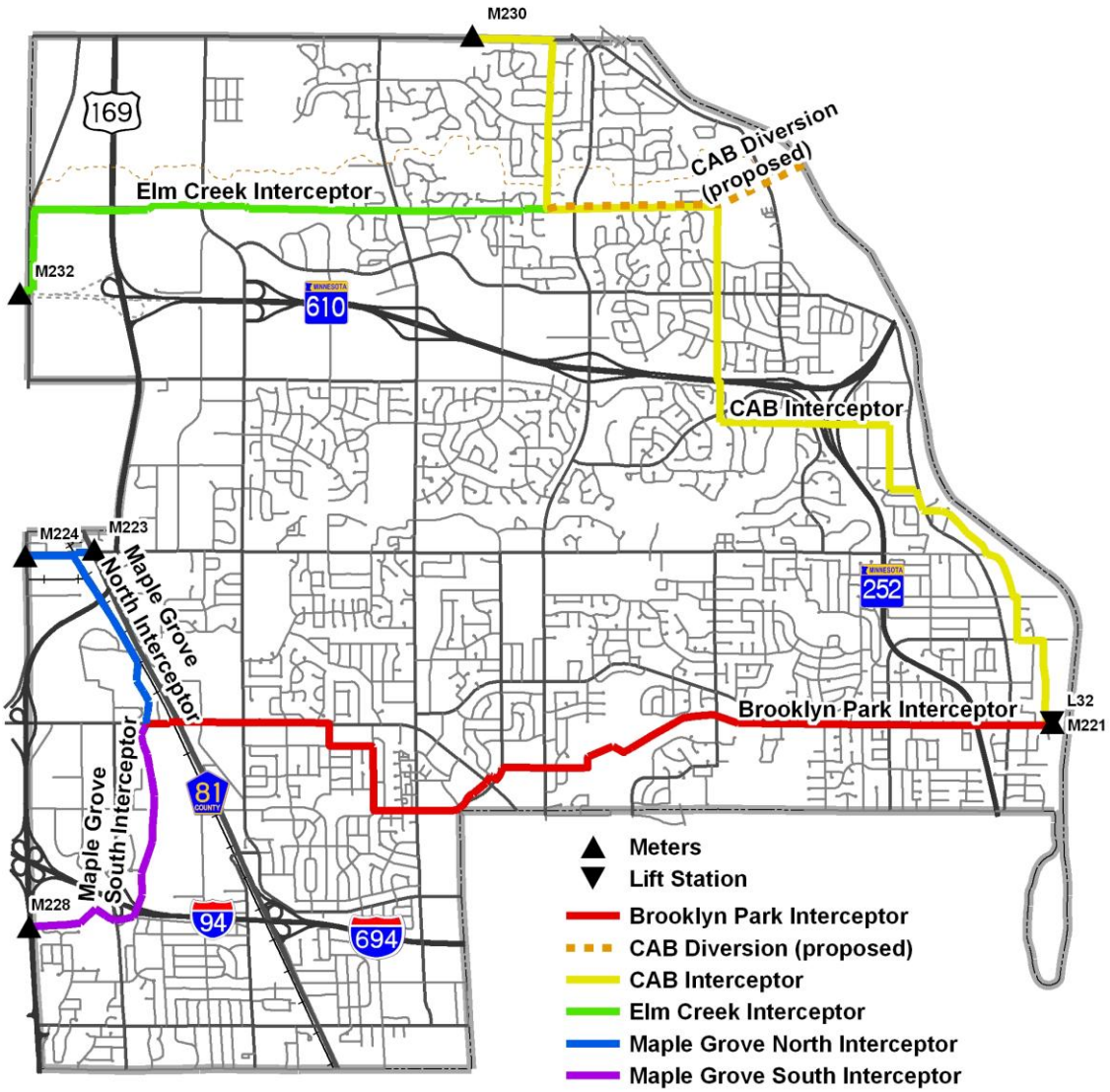
Champlin-Anoka-Brooklyn Park (CAB) Interceptor. The CAP Interceptor gravity line extends north and west from the east terminus of the Brooklyn Park Interceptor. The diameter of this interceptor ranges from 54 inches to 66 inches. The area within Brooklyn Park served by this interceptor is generally the central and eastern portion of the City north of 85th Avenue. Its capacity ranges from 9.3 MGD in Champlin to 43.6 MGD at its south terminus.

Elm Creek Interceptor. This pipe extends west to Maple Grove from the CAB Interceptor at 101st Avenue and Noble Avenue in the north central park of Brooklyn Park. The diameter of this interceptor ranges from 42 inches to 54 inches. The area within Brooklyn Park served by this interceptor is generally the area north of T.H. 610 that is not served by the CAB Interceptor.

The Brooklyn Park Interceptor and the CAB Interceptor join immediately west of the Mississippi River at Metropolitan Council meter station M221. Sanitary sewer flow is pumped across the Mississippi River via two 42-inch ductile iron forcemains with a capacity of 73.2 MGD.

Figure 6.4.2A: MCES Sanitary Sewer

February 2008



Existing Municipal System

The sanitary sewer system for Brooklyn Park has been extended to serve the majority of the city and includes interceptor, trunk and lateral mains to provide sanitary sewer service to the properties in this area. Currently the City's portion of the system has not been extended from the Elm Creek Interceptor to serve the area north of TH 610 and west of West Broadway/Winnetka Avenue. This system is connected to both the CAB and Elm Creek interceptors.

There are 21,655 connections to the city's sanitary sewer system and approximately 100 septic systems still in use within the City serving approximately 300 residents. The total sewered population is, therefore, approximately 76,900. The majority of the septic systems are located in the North and West parts of the city. Since this area is planned to be developed over the next 20

years, the number of septic systems within the City continues to be reduced. Hennepin County regulates all ISTS in operation in the city.

Table 6.4.2 Existing Sanitary Sewer Connections by Building Type				
Sanitary Sewer Connections		**Estimated Annual Flow (MG)**	**Average Daily Flow/Connection (gallons/day)**	**% of Total Flow**
Land Use	**No. Connections**			
Single Family	16,500	1,067	177	51.3
Town homes	3,350	150	123	7.2
Duplex	1,000	60	164	2.9
Multi-Family	207	340	4,500	16.3
Residential Sub-Total	**21,057**	**1,617**	**210**	**77.7**
Commercial	443	260	1,608	12.5
Institutional	78	62	2,178	3.0
Industrial	78	42	1,495	2.0
WTP	1	50		2.0
Non-Residential Sub-Total	600	464	-	
TOTAL	**21,657**	**2,081**		**100**

Lift Stations
The existing sanitary sewer system relies upon gravity flow to the greatest extent possible. The interceptors and trunk mains have been installed at sufficient depths to serve the City with gravity flow. The City currently operates six lift stations.

Existing Sanitary Sewer Flow Rates
The 2007 total community sanitary sewers flow as measured by the Metropolitan Council was 2,081 MG.

High Flow Generators
High flow generators are those properties that produce more than 50,000 gallons per day of effluent or produce flows greater than 5 percent of the total flow produced by the City. The City of Brooklyn does not have any high flow generators.

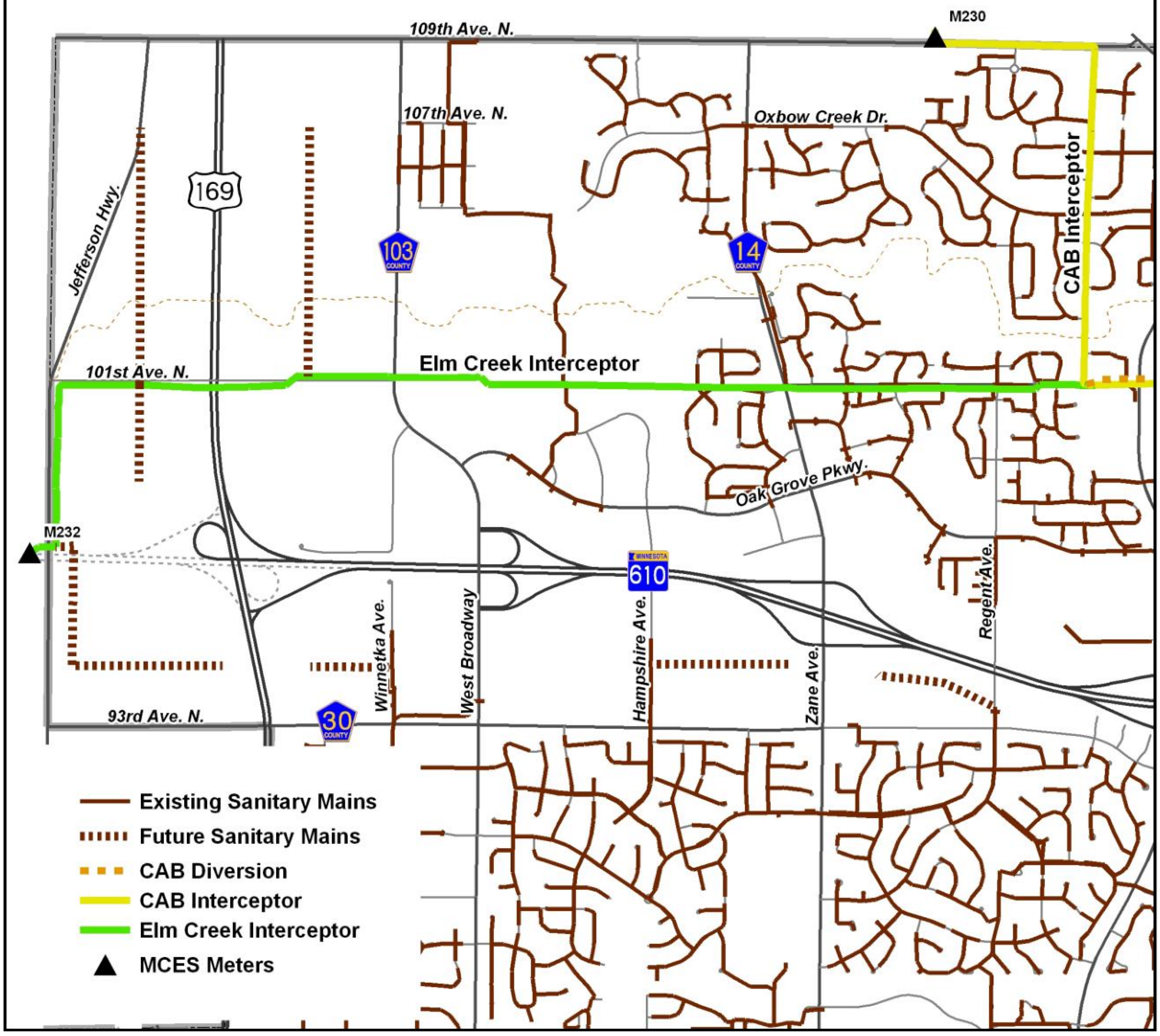
Intercommunity Flows
Several areas within the City of Brooklyn Park receive sanitary sewer service from an adjoining community and one area receives from Brooklyn Park as follows:

- The City of New Hope serves 22 properties along the City's southern boundary.
- The City of Brooklyn Center provides sanitary sewer service to Fair Oaks Elementary, Northview Junior High, and the Pebble Creek Apartments near I-94 and Zane Avenue.
- The City of Brooklyn Center also provides service to 73 parcels in the southeastern portion of Brooklyn Park.
- The City of Champlin provides sanitary sewer service to Champlin Park High School and several properties along 109th Avenue east of Champlin Park High School.
- Several hundred townhomes in the Northwest part of Brooklyn Center is served by the City of Brooklyn Park sanitary sewer system.

- The City of Maple Grove serves two religious buildings in the northwest part of Brooklyn Park.

Figure 6.4.2B: Planned Sanitary Sewer

February 2008



Maintenance

The City of Brooklyn Park Operations and Maintenance Department is responsible for all maintenance activities associated with the City's sanitary sewer system. There are no major outstanding maintenance issues with the sanitary sewer system at this time. Preventive maintenance is conducted by the department on a regular basis, including:

- Replacement of clay pipe house services within the right of way during street reconstruction projects
- Rehabilitation and replacement of clay pipe mains

- Sanitary sewer pipe repairs
- Replacement of manhole casting and rings +/- 150 annually
- Recondition lower portion of manholes +/-10 annually
- Television reports 10 year cycle; 25 miles annually
- Infiltration and inflow inspections
- Root treatment +/- 4,000 feet annually
- Repair of lift stations

6.4.3 Proposed Metropolitan facilities

In addition to completion of a multi-million dollar relining project of the Brooklyn Park Interceptor and rehabilitation to L-32, the MCES 2006-2011 Capitol Improvement Plan (CIP) includes the construction of a sanitary sewer relief tunnel and lift station to provide additional capacity for the recently completed Elm Creek Interceptor and provide peak flow bypass from the CAB Interceptor. This project is scheduled beyond 2011 at an estimated cost of $50 Million. This project is needed as the Northwest Metro Area continues to grow.

The following table illustrating the City's projected average annual wastewater flow and allowable peak hourly flow was extracted from the Brooklyn Park System Statement (pg W-2). The following table will change as the information becomes updated.

Table 6.4.3 Wastewater Projections

Year	2010	2020	2030
Sewered Population	76,360	84,000	89,000
Sewered Households	28,468	32,800	35,900
Sewered Employment	28,600	38,200	53,400
Average Annual Wastewater Flow (MGD)	5.8	6.16	6.37
Allowable Peak Hourly Flow (MGD)	13.34	14.17	14.65

6.4.4 Preventing and Reducing Excessive Infiltration and Inflow (I/I) in the Local Sewer System

Infiltration and inflow is the amount of clear water entering the collection system. Infiltration is attributable to water entering through main lines or service connections through defective pipes, pipe joints, connections or manhole walls. Inflow is attributed to water entering the collection system via roof leaders, drains, sump pumps, manhole covers, or cross connections with the storm sewer system. Infiltration and inflow decrease pipe and treatment plant capacity that could otherwise be used for sanitary waste.

The City of Brooklyn Park received a grant from the Metropolitan Council to initiate a sump pump inspection program. The program targeted approximately 1,800 customers in areas with high groundwater, clay or silty soil areas, or wet basements. The City completed the inspection program in summer 2000.

The Metropolitan Council has not established an infiltration and inflow goal for the City of Brooklyn Park. The City regularly televises the sewer system and makes repairs as necessary.

Supplemental Information

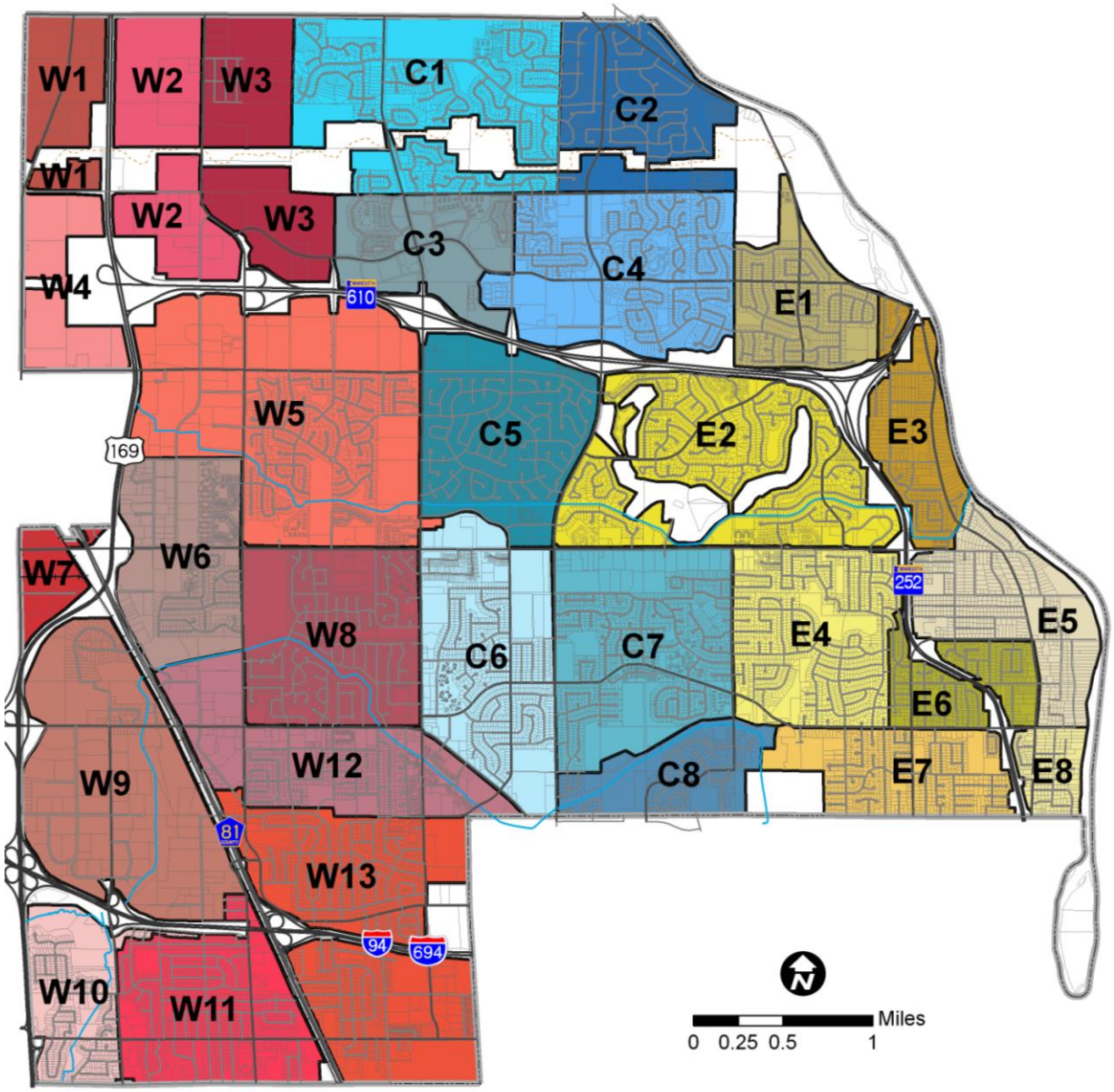
The following sanitary sewer information was provided to the Metropolitan Council and is inserted here to provide the information within the plan.

See spreadsheet attached to the chapter for flow details by district

Brooklyn Park

Sanitary Sewer Service Districts

August 2009



SANITARY SEWER SUB-CATCHMENTS

19-Oct-11 JW

Catchment Number	Est Gross Area (acres)	MCES Interceptor	TAZ	2010					2020					2030 (city expected)					Ultimate (city expected)					
				Population	Estimated Flow	Households	Employment	Estimated Flow	Population	Estimated Flow	Households	Employment	Estimated Flow	Population	Estimated Flow	Households	Employment	Estimated Flow	Population	Estimated Flow	Households	Employment	Estimated Flow	Total Flow
W1	636	**ECI**	**753, 754**	42	0.898	15	53	0.484	965	21	347	2658	34	1053	23	405	4500	33	2560	34	1150	10000	50	84.00
W2	502	**ECI**	**752**	8	0.180	3	13	0.142	973	21	350	4199	54	1820	39	700	7000	77	3000	36	900	7000	77	113.00
W3	1083	**ECI**	**751**	245	5.268	88	2300	33.580	2224	48	800	6822	87	2600	56	1000	10200	112	2500	70	1100	10000	112	182.00
W4	1302	**CAB**	**755, 757, 760, 2114**	2802	60.346	1008	1509	19.277	3336	72	1200	2914	37	3640	78	1400	4522	50	4000	80	1400	4522	60	140.00
W5	413	**MGN**	**762, 770, 771**	300	6.466	108	2449	31.286	409	9	147	1719	22	382	8	147	2696	30	400	9	147	2700	30	39.00
W6	643	**BPI**	**761, 1558, 1559**	2574	55.437	926	1819	23.238	2716	58	977	2541	32	2974	64	1144	2936	32	3150	68	1150	2940	32	100.00
W7	637	**BPI**	**759**	5282	113.748	1900	1028	13.133	5282	114	1900	744	10	4940	106	1900	1133	12	4940	106.38	1900	1133	12	118.79
W9	989	**BPI**	**765, 766, 729***	10564	227.496	3800	3594	45.913	10589	228	3809	3507	45	10858	234	4176	4048	44	10920	235.16	4200	4048	44	279.49
W8	737	**MGS**	**763, 764**	206	4.430	74	6833	87.292	206	4	74	6178	79	192	4	74	7895	86	192.4	4.14	74	7900	87	90.65
W10	341	**MGS**	**769**	1668	35.920	600	134	1.712	1398	30	503	220	3	1326	29	510	234	3	1300	28.00	500	234	3	30.56
W11	591	**BPI**	**768**	4726	101.774	1700	389	4.969	5365	116	1930	568	7	5156	111	1983	620	7	5155.8	111.03	1983	620	7	117.82
W12	465	**BPI**	**767**	4643	99.978	1670	759	9.696	5721	123	2058	1121	14	5351	115	2058	1200	13	5350.8	115.23	2058	1200	13	128.37
																			0	0.00			0	0.00
C1	1309	**ECI**	**750**	4865	104.768	1750	395	5.046	5029	108	1809	231	3	5200	112	2000	400	4	5200	111.98	2000	400	4	116.36
C2	1082	**CAB**	**749**	5560	119.735	2000	185	2.363	5621	121	2022	831	11	5798	125	2230	1039	11	5798	124.86	2230	1040	11	136.25
C3	668	**CAB**	**756**	3614	77.827	1300	646	8.253	3792	82	1364	599	8	3996	86	1537	1000	11	4004	86.23	1540	1000	11	97.18
C4	334	**BPI**	**758**	3892	83.814	1400	129	1.648	4092	88	1472	92	1	4313	93	1659	159	2	4316	92.95	1660	160	2	94.70
C5	456	**BPI**	**745**	2780	59.867	1000	857	10.948	3097	67	1114	701	9	3185	69	1225	1074	12	3185	68.59	1225	1074	12	80.35
C6	762	**BPI**	**743**	3336	71.841	1200	1256	16.045	3864	83	1390	715	9	3942	85	1516	844	9	4160	89.59	1600	850	9	98.89
																			0	0.00			0	0.00
E1	465	**CAB**	**748**	503	10.836	181	16	0.204	559	12	201	10	0	530	11	204	10	0	530.4	11.42	204	10	0	11.53
E2	1041	**CAB**	**746**	4851	104.468	1745	798	10.194	4851	104	1745	850	11	5330	115	2050	880	10	5330	114.78	2050	880	10	124.42
E3	372	**CAB**	**747**	1081	23.288	389	162	2.070	1382	30	497	230	3	1292	28	497	230	3	1292.2	27.83	497	230	3	30.35
E4	707	**BPI**	**744**	4629	99.679	1665	324	4.139	4629	100	1665	357	5	4573	98	1759	398	4	4576	98.54	1760	400	4	102.92
E5	670	**CAB**	**741**	3614	77.827	1300	92	1.175	3614	78	1300	15	0	3497	75	1345	15	0	3510	75.59	1350	15	0	75.75
E6	459	**BPI**	**742**	3336	71.841	1200	249	3.181	3336	72	1200	106	1	3237	70	1245	160	2	3237	69.71	1245	160	2	71.46
				75121	1617.734	27022		335.990	83050	1788	29874	37928	485	85186	1834	32764		566	88608	1869.00	33923		595	
Total	16,664.00												2273					2401					2464	2463.83

MGS = Maple Grove South (7015-C)	129.354
MGN = Maple Grove North (7015-A&B)	37.752
BPI = Brooklyn Park Interceptor (4-BP-540)	1118.387
CAB = Champlin,Anoka,Brooklyn Park Interceptor (4-BP-54 & 8252-481)	517.866
ECI = Elm Creek Interceptor (9004)	150.366
	1953.724

***** = Catchment W-9 does not include all property within TAZ 729. Two multi-family developments, one small industrial property, a religious facility, and a junior high school are serviced by Brooklyn Center.

Note = The Brooklyn Park portion of TAZ 740 (Durham Island) does not have any habitable properties nor sanitary sewer access, therefore not listed in the table above.